

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Please cancel claims 62 to 94 without prejudice or disclaimer.

Please amend claims 61, 96, 97, 99, 100 and 101 as follows.

Please add new claims 102 to 106 as follows.

Claims 1 to 60. (cancelled)

61. (currently amended) An isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 4 a BRCA2 gene containing a nucleotide sequence variation selected from the group consisting of:

(a) ~~a thymidine at a position in exon 15 corresponding to nucleotide 199 of SEQ ID NO: 2.~~

62 to 94. (cancelled)

95. (previously presented) The isolated nucleic acid molecule of claim 61, wherein said nucleic acid molecule is operably linked to one or more expression control elements.

96. (currently amended) A vector comprising ~~an~~ the isolated nucleic acid molecule of claim 61.

97. (currently amended) A host cell transformed to contain the nucleic acid molecule of ~~any one of~~ claims 61 ~~or~~ 95 ~~or 96~~.

98. (previously presented) A host cell comprising a vector of claim 96.

99. (currently amended) ~~A~~ The host cell of claim 98, wherein ~~said the host cell~~ is selected from the group consisting of a prokaryotic host cell hosts and eukaryotic hosts.

100. (currently amended) A method for producing a polypeptide comprising the step of culturing a host cell transformed with the nucleic acid molecule of ~~any one of~~ claims 61 ~~or~~ 95 ~~or 96~~ under conditions in which the protein encoded by said nucleic acid molecule is expressed.

101. (currently amended) The method of claim 100, wherein said host cell is ~~selected from the group consisting of a prokaryotic host cell hosts and eukaryotic hosts.~~

102. (new) The method of claim 100, wherein the host cell is a eukaryotic host cell..

103. (new) The host cell of claim 98, wherein the host cell is a eukaryotic host.

104. (new) The isolated nucleic acid molecule of claim 61, wherein the nucleic acid molecule encodes a BRCA2 protein.

105. (new) The isolated nucleic acid molecule of claim 102, wherein the BRCA2 protein comprises the amino acid sequence of SEQ ID NO: 5.

106. (new) An isolated nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO: 4.